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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: GOODHUE, Jr., K. Gifford,
et al.

Serial No.: 09/880,409 ✓

Confirmation No.: 8567

Filed: 13 June 2001

For: COMPOSITION AND METHOD FOR A DUAL
FUNCTION SOIL-GROUTING EXCAVATING OR
BORING FLUID

Group Art Unit: Not known

Examiner: Not Known

Atty. Dkt. No.: 11084.0015.CPUS00
GOOD:015--1

**SUPPLEMENTAL INFORMATION DISCLOSURE STATEMENT
UNDER 37 CFR 1.97**

Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

In compliance with the duty of disclosure and candor 37 C.F.R. 1.56 (a), the undersigned representative submits with this paper patents, patent applications, publications, and other materials and information that may be material to the examination of the above noted patent application.

☒ The Examiner's attention is specifically brought to printed information has been listed on enclosed PTO FORM 1449 of which there are seven pages. A copy of each listed item is also enclosed.



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The undersigned representative requests that an initialed copy of the enclosed FORM 1449 be entered into the application file wrapper and returned to the undersigned with the next communication from the Office.

The filing of this Information Disclosure Statement shall not be construed as a representation that a search of the prior art has been made, or an admission that the information cited is or is considered to be, material to the patentability, or that no other material information exists. The filing of this Information Disclosure Statement shall not be construed as an admission against interest in any manner. [37 C.F.R. 1.97(g)]

The submission of this Information Disclosure Statement is believed to be within three months of the filing date of the application or the date of entry into the national stage of an international application or before the mailing date of a first Office Action on the merits, whichever occurs last. [37 C.F.R. 1.97(b)]

If for some reason a first Office Action has issued on the above application, the undersigned representative requests that this Information Disclosure Statement be accepted under 37 CFR 1.97(c)(2). The undersigned authorizes the charging of the fee due as set forth in 37 CFR 1.17(p) to Deposit Account 01-2508, referencing Order No. 11084.0015.CNUS02.

The undersigned representative requests any extension of time that may be deemed necessary to further the prosecution of this application.

The undersigned representative authorizes the Commissioner to charge any additional fees under 37 C.F.R. 1.16 or 1.17 that may be required, or credit any overpayment, to Deposit Account No. 01-2508, referencing Order No. 11084.0015.CNUS02.

In order to facilitate the resolution of any issues or questions presented by this paper, the Examiner should directly contact the undersigned by phone to further the discussion.



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Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Carter J. White".

Carter J. White

Patent Attorney

Reg. No. 41374

Tel. 713 268 1372

Date: 30 July 03

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List of Patents and Publications for Applicant's

INFORMATION DISCLOSURE STATEMENT

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U.S. Patent Documents

N/A

Foreign Patent Documents

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N/A

U.S. Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Name	Class	Sub Class	Filing Date if App.
	A1						

Foreign Patent Documents

Exam. Init.	Ref. Des.	Document Number	Date	Country	Class	Sub Class	Translation Yes/No
	B1	1 191 292	07/30/85	CA			
	B2	2 088 344	10/11/93	CA			
	B3	1 332 502	10/18/94	CA			
	B4	160 427 A2	06/11/85	EP			
	B5	165 004 A2	12/18/85	EP			
	B6	194 857 A2	09/17/86	EP			
	B7	200 062 A3	11/05/86	EP			
	B8	273 210 A2	07/06/88	EP			
	B9	634 468 A1	01/18/95	EP			
	B10	2 647 463	11/30/90	FR			
	B11	1 517 422	07/12/76	GB			
	B12	2 221 904	02/21/90	GB			
	B13	2 221 940	02/21/90	GB			
	B14	2 277 759	11/09/94	GB			

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	

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	B1						

Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C1	Bol, G.M., <u>The Effect of Various Polymers & Salts on Borehole & Cutting Stability in Water-Based Shale Drilling Fluids</u> . Koninklijke/Shell E&P Laboratorium, IADC/SPE Conference 1986; IADC/SPE 14802.
	C2	Bruce, D.A. et al., <u>Structural Underpinning by Pinpiles</u> .
	C3	Carnicom, W.M., <u>A Systems Approach for the Solution of Mud Problems</u> , NL Baroid/NL Industries, Inc., 1982.
	C4	Cernak, B., <u>The Time Effect Suspension of the Behavior of Piers</u> , Institute of Civil Engineering, Bratislava, CSSR.
	C5	Chesser, B.G., <u>Design Considerations for an Inhibitive & Stable Water-Based Mud System</u> , Milpark, Houston, Texas, IADC/SPE Conference 1986, IADC/SPE 14757.
	C6	Cooke, R.W., <u>Load Transfer from Bored, Cast-In-Situ Piles in London Clay</u> , 1979.
	C7	Crapps, D., <u>Design Construction, and Inspection of Drilled Shafts in Limerock and Limestone</u> , Prepared for 35th Annual Geotechnical Conference, University of Kansas, March 7, 1986.
	C8	Day, P.W. et al., <u>Skin Friction of Underslurry Piles</u> .
	C9	Eide, O. et al., <u>Special Application of Cast-in-Place Walls for Tunnels in Soft Clay in Oslo</u> , Norwegian Geotechnical Institute, Bonde & Co., Oslo, 1972.

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Exam. Init.	Ref. Des.	Citation
	C10	Fearenside, G.R. et al., <u>The Skin Friction of Bored Piles Formed in Clay Under Bentonite</u> , Construction Industry Research and Information Association, London.
	C11	Felio, G.Y. et al., <u>A New Rod Shear Device for the Measurement of the Degradation of Soil-Pile Interfaces</u> , University of California at Los Angeles, Presented at 21st Annual OTC in Houston, Texas, May 14, 1989.
	C12	Fisk, J. & Perez, J., <u>Filtration Studies to Determine Filter Cake Compressibilities for Sun Oil's EZ-Mud Fluid</u> , NL Baroid/NL Petroleum Services, Inc., Fluids Research & Development Technical and Analytical Services/Support; EMB-4305; January 29, 1988.
	C13	Fisk, J.V. et al., <u>Physical Properties of Drilling Fluids at High Temperatures and Pressures</u> , Baroid Drilling Fluids, SPE Drilling Engineering, Dec. 1989.
	C14	Fleming, C.N., <u>Moderate pH, Potassium, Polymer-Treated Mud Reduces Washout</u> , Chevron USA, Inc., IADC/SPE Conference 1986; IADC/SPE 14758.
	C15	Gale, R.S., <u>Filtration Theory with Special References to Sewage Sludges</u> , 1967.
	C16	Garrison, A.D. et al., <u>Dispersion of Clay and Shales by Fluid Motion</u> , Galveston Meeting, 1939.
	C17	Gray, G.R., <u>Drilling with Mud; Simple Tests Save Time and Money</u> , Baroid Division, NL Industries, Inc.
	C18	Gray, G.R., <u>Plan the Mud Program to Reduce Exploration Cost</u> , Mining Industry, Baroid Division, National Lead Co., Houston, Texas.
	C19	Gray, G.R., <u>Right Drilling Fluid Key to Efficient Operation</u> , Mining Industry, Baroid Division, NL Industries, Inc.
	C20	Guild, G.J., <u>Operating PHPA/NaCl Systems</u> , Amoco Production Company, January 1990.
	C21	Hager, R., <u>Cast-In-Drilled-Hole-Piles in Adverse Soil Conditions</u> , State of California, Business and Transportation Agency, Department of Public Works, and Division of Highways Bridge Department.
	C22	Hagimoto, H. et al., <u>D.K. Shield Method</u> , Daho Construction Co. Ltd., Tokyo, Japan, 1990.
	C23	Holcombe, R.F. et al., <u>Subsidence of the Houston/Galveston Area</u> , McClelland Engineers, Spring, 1980.

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N/A

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Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C24	Holden, J.C., <u>The Construction of Bored Piles in Weathered Sedimentary Rock</u> , Road Construction Authority of Virginia, May 1984.
	C25	Hooks, J. M. et al., <u>The Design & Construction of Diaphragm Walls in Western Europe 1979</u> , Supplement to 1980 World Survey of Current Research & Development on Roads & Road Transport, Dec. 1990.
	C26	Inoue, T. et al., <u>An Investigation of Shear Strength of Slurry Clay</u> , Japanese Society of Soil Mechanics and Foundation Engineering, Dec. 1990.
	C27	Janes, M. et al., <u>Pile Load Test Results Using the New Statnamic Method</u> , Berminghammer Corporation, McMaster University.
	C28	Janes, M., <u>Statnamic Load Test Results</u> , Comparative Pile Foundation Load Test Program, Texas A&M University, 1991.
	C29	Johnston, I.W., <u>New Developments in the Prediction of Side Resistance of Piles in Soft Rock</u> , Monash University, Melbourne.
	C30	Johnson, I.W. et al., <u>Side Resistance of Piles in Weak Rock</u> , Monash University, Melbourne, Victoria, Australia, 1992.
	C31	Kadaster, A.G. et al., <u>Field Application of PHPA Muds</u> , Amoco Production Co., Amoco Norway, Society of Petroleum Engineers Conference 1989, SPE 119531.
	C32	Kheng, H.Y., <u>Rheological and Physico-Chemical Properties of Palygorskite Clay and Anionic Polymer Slurries Used in Drilling Shaft Construction</u> , A Dissertation Presented to the Univ. Of Florida, 1989.
	C33	Kulhawy, F.H., <u>Drilled Shaft Foundations</u> , Cornell Univ., Ithaca, New York, 1989.
	C34	Lambe, T.W., <u>The Structure of Compacted Clay</u> , Soil Mechanics and Foundations Division, May 1958.
	C35	Leyendecker, E.A., <u>Drilling Fluids as Used with Drilled Shaft Construction</u> , Dresser Industries, Presented at the State Department of Highways and Public Transportation, Austin, Texas, 1984.
	C36	Liao, A., <u>Evaluation of Polymer-Bentonite Soil Admixtures as Hydraulic Barriers for Oilfield Waste Pits and Non-Oilfield Applications</u> , NL Baroid/NL Industries, Inc., 1988.

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Exam. Init.	Ref. Des.	Citation
	C37	Liao, W.A. et al., <u>Adsorption Characteristics of PHPA on Formation Solids</u> , Baroid Drilling Fluids, Inc., 1990 IADS/SPE Drilling Conference, Houston, Texas, February 27-March 2, 1990.
	C38	O'Neill, M. et al., <u>Effects of Mineral and Polymer Slurries on Side Load Transfer in Drilled Shafts</u> , University of Houston, January 1992.
	C39	O'Neill, M. et al., <u>Effects of Stratigraphic and Construction Details on the Load Transfer Behavior of Drilled Shafts</u> , Transportation Research Board, 71st Annual Meeting, January 12-16, 1992, Washington, D.C.
	C40	O'Neill, M.W., <u>Effects of Mineral and Polymer Slurries on Drilled Shafts</u> , Paper Presented to the Deep Foundation Institute, Chicago, IL, October 8, 1991.
	C41	O'Neill, M.W., <u>Side Load Transfer in Driven and Drilled Piles</u> , March 1984.
	C42	Pells, P.J.N. et al., <u>Bentonite Piles in Durban</u> , Soil Mechanics and Foundation Engineering, Proceedings of the Sixth Regional Conference for Africa, Dubai, 1975.
	C43	Plank, J.P., <u>Visualization of Fluid-Loss Polymers in Drilling Mud Filter Cakes</u> , SKW Trostberg AG & F.A. Gossen, SKW Chemicals, Inc., Society of Petroleum Engineers Conference 1989; SPE 19534.
	C44	Reese, L.C. et al., <u>Bentonitic Slurry in Constructing Drilled Piers</u> , University of Texas.
	C45	Reese, L.C., <u>Drilled Piers in Rock</u> , 1989.
	C46	Rowe, P.W. et al., <u>Energy Components During the Triaxial Cell and Direct Shear Tests</u> .
	C47	Sliwinski, Z.J. et al., <u>Conditions for Effective end Bearing of Bored Cast-In-Situ Piles</u> , ICE, London, 1979.
	C48	Tamaro, G., <u>Slurry Wall Technical Course</u> , Resource Management Projects, April 19 & 20, 1976.
	C49	Tan, M.J.C. et al., <u>Estimation of Side Resistance of Compressible Piles in a Softening Medium</u> , Australian Geomechanics, October 1991.
	C50	Tan, T.S. et al., <u>Behavior of Clay Slurry</u> , Japanese Society of Soil Mechanics and Foundation Engineering, December 1990.
	C51	Tan, T.S. et al., <u>Sedimentation of Clayey Slurry</u> .

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Other Art (Including Author, Title, Date Pertinent Pages, Etc.)

Exam. Init.	Ref. Des.	Citation
	C52	Timmerhaus, P. et al., <u>Plant Design and Economics for Chemical Engineers</u> , University of Colorado.
	C53	Tucker K. et al., <u>The Effect of Bentonitic Slurry on Drilled Shafts</u> , Research Report 351-IF, Project 3-5-83-351, Center for Transportation Research, University of Texas at Austin, July 1984.
	C54	Turner, J. et al., <u>Drained Uplift Capacity of Drilled Shafts Under Repeated Axial Loading</u> .
	C55	Williams, Jr., M., <u>Radial Filtration of Drilling Muds</u> , Galveston Meeting, October 1939.
	C56	Wong, R.C.K. et al., <u>Design and Performance Evaluation of Vertical Shafts: Rational Shaft Design Method and Verification of Design Method</u> , University of Alberta, Canada, January 20, 1988.+
	C57	<u>Basic Guidelines for Running NL Baroid's EZ-Mud Polymer System</u> , NL Baroid/NL Industries, Inc.
	C58	<u>Bentonite-Extended Muds (Ben-Ex)</u> , N.L. Baroid/NL Industries, Inc.
	C59	<u>Cassion Load Test Results, Residual Treatment Facilities, Phase I, Deer Land, MA</u> , GZA GeoEnvironmental, Inc., New Upperton Falls, MA; June 1992; File No. 12553.2.
	C60	<u>Clay Chemistry</u> , NL Baroid/NL Industries, Inc., June 19, 1989.
	C61	<u>Drilling Fluids Products Cross Reference Chart</u> , NL Baroid/NL Industries, Inc.
	C62	<u>Drilling Specialties Company Product Literature</u> , Drilling Specialties Co., 1981.
	C63	<u>Excerpt from Specification for Foundations Contract, Stage II, West Gate Freeway</u> , Federation of Piling Specialists.
	C64	<u>Field Filter Cake Experiments</u> .
	C65	<u>Filtration Equations</u> .
	C66	<u>Formulation and Properties of "Standard" Muds for CST Fluids Optimization Tests</u> , NL Baroid/NL Industries, Inc.; January 9, 1990.
	C67	<u>Grouts and Drilling Muds in Engineering Practice</u> , British National Society of the International Society of Soil Mechanics and Foundation Engineering at the Institution of Civil Engineers held in May 1963.

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See Page 1 - 6

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	C68	<u>Hyperfloc Polyacrylamides</u> , Technical Information Bulletin, Hychem Inc. 1989.
	C69	<u>Influence of the Boring Methods on the Behavior of Cast-In-Place Bored Piles</u> .
	C70	<u>Komatsu Product Literature</u> , Tokyo, Japan.
	C71	<u>Load Test Data BP London</u> .
	C72	<u>Manual of Drilling Fluids Technologies; Calculations, Charts, and Tables for Mud Engineering</u> , NL Baroid/NL Industries, Inc., 1985.
	C73	<u>Manual of Drilling Fluids Technology; Fundamental Characteristics of Drilling Fluids</u> , NL Baroid/NL Industries, Inc., 1985.
	C74	<u>Manual of Drilling Fluids Technology; Sources of Mud Problems</u> , NL Baroid/NL Industries, Inc., 1985.
	C75	<u>Polymer Soil Conditioners</u> , SNF Floerger, 1990.
	C76	<u>Report of Geotechnical Engineering Evaluation Load Test Program for Drilled Shaft Foundations</u> , Ellis and Associates, January 7, 1985.
	C77	<u>Standard Specification for the Construction of Drilled Piers</u> , ACI Committee 336, American Concrete Institute, Detroit, Michigan.
	C78	

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